**BRUHAT BANGALORE MAHANAGARA PALIKE**

**roject: Improvements to Drains and Asphalting to Roads at Vidyasagar Layout and Surrounding Area in Ward No 06 Byatarayanapura Sub Division**

**Construction Cost: 5000000.00**

| l. o. | Description of work | Unit | No. | Length m | Breadth m | Depth m | Quantity | Rate in Rs. | Amount in Rs. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.133, I.No.19.1 of PW, P&IWTD SR 2016-17) | | | | | | | | |
| | **Desilt** | Cum | | | | | | | |
| | **Saraipalya** | | | | | | | | |
| | Balanced Portion in Saripalya Mn | | 2 | 120.00 | 0.45 | 0.50 | 54.00 | | |
| | Connecting Road between Saraiplaya Main Rd abd Sadiq Lyout Main Rd | | 2 | 80.00 | 0.45 | 0.50 | 36.00 | | |
| | Balanced Sadiq Layout Main Rd | | 2 | 60.00 | 0.45 | 0.45 | 24.30 | | |
| | Damaged Drain | | | | | | | | |
| | Balanced Portion in Saripalya Mn | | 2 | 53.00 | 1.10 | 0.85 | 99.11 | | |
| | Connecting Road between Saraiplaya Main Rd abd Sadiq Lyout Main Rd | | 2 | 38.00 | 1.10 | 0.85 | 71.06 | | |
| | | | | | | | **284.47** | 170.92 | **48621.61** |
| | **Basic rate** | **82.00** | | | | | | | |
| | **Loading and unloading with 5km lead= 68+2.5x1.28x10 =** | **84.00** | | | | | | | |
| | **Area Weightage 6%** | **4.92** | | | | | | | |
| | **Final Rate** | **170.92** | | | | | | | |
| 2 | Providing granite slabs of selected quality roughly dressed havinf a size of 7.5 cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.(5.31.1 | | | | | | | | |
| | | Cum | | | | | | | |
| | For L Shape Drain | | | | | | | | |
| | Maisun Enginnering Road | | 2 | 40.00 | 1.20 | | 96.00 | | |
| | GM Furnitures Road | | 2 | 38.00 | 1.20 | | 91.20 | | |
| | Road 1 | | 2 | 38.00 | 1.20 | | 91.20 | | |
| | Road 2 | | 2 | 40.00 | 1.20 | | 96.00 | | |
| | Road 3 | | 2 | 42.00 | 1.20 | | 100.80 | | |
| | Road 4 | | 2 | 40.00 | 1.20 | | 96.00 | | |
| | Road 5 | | 2 | 42.00 | 1.20 | | 100.80 | | |
| | | | | | | | **672.00** | 665.68 | **447336.96** |
| | **Basic rate** | **628.00** | | | | | | | |
| | **Area Weightage 6%** | **37.68** | | | | | | | |
| | **Final Rate** | **665.68** | | | | | | | |

| | Description of work | Unit | No. | Length m | Breadth m | Depth m | Quantity | Rate in Rs. | Amount in Rs. |
|---|---|---|---|---|---|---|---|---|---|
| | KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., for columns, pillars, post and struts, square / rectangular/ polygon in plan including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (P.No.16, I.No.4.32 of PW, P&IWTD SR 2016-17) | | | | | | | | |
| | Damaged Drain | Sqm | | | | | | | |
| | Balanced Portion in Saripalya Mn | | 4 | 53.00 | | 0.73 | 153.70 | | |
| | Connecting Road between Saraiplaya Main Rd al | | 4 | 38.00 | | 0.73 | 110.20 | | |
| | | | | | | | **263.90** | 387.96 | **102382.64** |
| | **Basic rate** | **366.00** | | | | | | | |
| | **Area Weightage 6%** | **21.96** | | | | | | | |
| | **Final Rate** | **387.96** | | | | | | | |
| 4 | KSRB 4.2.2 : Providing and laying in position reinforced cement concrete of Design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.460 cum, with super plasticisers @ 3 liters confirming to is 9103-1999 reafirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6(P.No.13, I.No.4.11 of PW, P&IWTD SR 2016-17) | | | | | | | | |
| | Bottom Raft | Cum | | | | | | | |
| | Balanced Portion in Saripalya Mn | | 2 | 53.00 | 0.90 | 0.15 | 14.31 | | |
| | Connecting Road between Saraiplaya Main Rd al | | 2 | 38.00 | 0.90 | 0.15 | 10.26 | | |
| | Walls | | | | | | | | |
| | Balanced Portion in Saripalya Mn | | 4 | 53.00 | 0.15 | 0.60 | 19.08 | | |
| | Connecting Road between Saraiplaya Main Rd al | | 4 | 38.00 | 0.15 | 0.60 | 13.68 | | |
| | | | | | | | **57.33** | 6356.82 | **364436.49** |
| | **Basic rate** | **5997.00** | | | | | | | |
| | **Area Weightage 6%** | **359.82** | | | | | | | |
| | **Final Rate** | **6356.82** | | | | | | | |
| 5 | KSRB - 4.9.2: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3. (P.No.17, I.No.4.46.3 of PW, P&IWTD SR 2016-17) | | | | | | | | |
| | Consider 50Kgs/cum for Drain | Tonne | | 57.33 | 0.050 | -- | 2.87 | | |
| | | | | | | | **2.87** | 68113.48 | **195485.69** |
| | **Basic rate** | **64258.00** | | | | | | | |
| | **Area Weightage 6%** | **3855.48** | | | | | | | |
| | **Final Rate** | **68113.48** | | | | | | | |
| 6 | Providing and fixing **RCC Precast cover slab of 100mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate) | | | | | | | | |
| | Cover Slab | Sqm | | | | | | | |
| | Balanced Portion in Saripalya Mn | | 2 | 53.00 | 0.90 | -- | 95.40 | | |
| | Connecting Road between Saraiplaya Main Rd al | | 2 | 38.00 | 0.90 | -- | 68.40 | | |
| | | | | | | | **163.80** | 1817.00 | **297624.60** |
| | **Data Rate** | **1817.00** | | | | | | | |

| Description of work | Unit | No. | Length m | Breadth m | Depth m | Quantity | Rate in Rs. | Amount in Rs. |
|---|---|---|---|---|---|---|---|---|
| 7 SRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.142, I.No.19.14 of PW,P&IWTD S.R 2016-17) | | | | | | | | |
| Road Formation | Cum | | | | | | | |
| Connecting Road between Saraiplaya Main Rd abd Sadiq Lyout Main Rd | | 1 | 112.00 | 1.20 | 0.23 | 30.91 | | |
| Balanced Sadiq Layout Main Rd | | 1 | 60.00 | 5.50 | 0.23 | 75.90 | | |
| Maisun Enginnering Road | | 1 | 42.00 | 4.50 | 0.20 | 37.80 | | |
| GM Furnitures Road | | 1 | 40.00 | 4.60 | 0.20 | 36.80 | | |
| Road 1 | | 1 | 38.00 | 3.80 | 0.20 | 28.88 | | |
| Road 2 | | 1 | 40.00 | 3.00 | 0.20 | 24.00 | | |
| Road 3 | | 1 | 42.00 | 3.20 | 0.20 | 26.88 | | |
| Road 4 | | 1 | 40.00 | 3.20 | 0.20 | 25.60 | | |
| Road 5 | | 1 | 42.00 | 3.00 | 0.20 | 25.20 | | |
| cross road | | 1 | 92.00 | 4.00 | 0.20 | 73.60 | | |
| Bad Reaches | | | | | | | | |
| | | 8 | 2.00 | 2.50 | 0.23 | 9.20 | | |
| | | 10 | 1.50 | 1.50 | 0.23 | 5.18 | | |
| | | | | | | **399.95** | 132.76 | **53096.96** |
| **Basic rate** | **46.00** | | | | | | | |
| **Loading and unloading with 5km lead= 68+2.5x1.28x10 =** | **84.00** | | | | | | | |
| **Area Weightage 6%** | **2.76** | | | | | | | |
| **Final Rate** | **132.76** | | | | | | | |
| 8 KSRB 4-1.2 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No. 12/I.No. 4.2 of CSR 2015-16) | | | | | | | | |
| **Road** | Cum | | | | | | | |
| **GM Furnitures Road** | | | | | | | | |
| Maisun Enginnering Road | | 1 | 42.00 | 4.50 | 0.15 | 28.35 | | |
| GM Furnitures Road | | 1 | 40.00 | 4.60 | 0.15 | 27.60 | | |
| Road 1 | | 1 | 38.00 | 3.80 | 0.15 | 21.66 | | |
| Road 2 | | 1 | 40.00 | 3.00 | 0.15 | 18.00 | | |
| Road 3 | | 1 | 42.00 | 3.20 | 0.15 | 20.16 | | |
| Road 4 | | 1 | 40.00 | 3.20 | 0.15 | 19.20 | | |
| Road 5 | | 1 | 42.00 | 3.00 | 0.15 | 18.90 | | |
| cross road | | 1 | 92.00 | 4.00 | 0.15 | 55.20 | | |
| Damaged Drain | | | | | | | | |
| Balanced Portion in Saripalya Mn | | 2 | 53.00 | 1.10 | 0.10 | 11.66 | | |
| Connecting Road between Saraiplaya Main Rd al | | 2 | 38.00 | 1.10 | 0.10 | 8.36 | | |
| | | | | | | **229.09** | 5348.76 | **1225347.43** |
| **Basic rate** | **5046.00** | | | | | | | |
| **Area Weightage 6%** | **302.76** | | | | | | | |
| **Final Rate** | **5348.76** | | | | | | | |

| Description of work | Unit | No. | Length | Breadth | Depth | Quantity | Rate in Rs. | Amount in Rs. |
|---|---|---|---|---|---|---|---|---|
| | | | m | m | m | | | |
| cement concrete pavement.Construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 design mix M20/M30 , with 25mm and down size graded granite metal coarse aggregates and fine aggregtes , with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 , mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges, joint filler, separation membrane, selant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete as per specifications. - M20 (at 300Kg per cum coarse aggregate @ 0.64cum and fine aggregate @ 0.43cum)(22.2.6) | | | | | | | | |
| **Road** | Cum | | | | | | | |
| **GM Furnitures Road** | | | | | | | | |
| Maisun Enginnering Road | | 1 | 42.00 | 4.50 | 0.10 | 18.90 | | |
| GM Furnitures Road | | 1 | 40.00 | 4.60 | 0.10 | 18.40 | | |
| Road 1 | | 1 | 38.00 | 3.80 | 0.10 | 14.44 | | |
| Road 2 | | 1 | 40.00 | 3.00 | 0.10 | 12.00 | | |
| Road 3 | | 1 | 42.00 | 3.20 | 0.10 | 13.44 | | |
| Road 4 | | 1 | 40.00 | 3.20 | 0.10 | 12.80 | | |
| Road 5 | | 1 | 42.00 | 3.00 | 0.10 | 12.60 | | |
| cross road | | 1 | 92.00 | 4.00 | 0.10 | 36.80 | | |
| | | | | | | **139.38** | 5508.82 | **767819.33** |
| **Basic rate** | **5197.00** | | | | | | | |
| **Area Weightage 6%** | **311.82** | | | | | | | |
| **Final Rate** | **5508.82** | | | | | | | |
| 10 Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.(22.7) | | | | | | | | |
| **Road** | Cum | | | | | | | |
| **GM Furnitures Road** | | | | | | | | |
| Maisun Enginnering Road | | 1 | 42.00 | 4.50 | | 189.00 | | |
| GM Furnitures Road | | 1 | 40.00 | 4.60 | | 184.00 | | |
| Road 1 | | 1 | 38.00 | 3.80 | | 144.40 | | |
| Road 2 | | 1 | 40.00 | 3.00 | | 120.00 | | |
| Road 3 | | 1 | 42.00 | 3.20 | | 134.40 | | |
| Road 4 | | 1 | 40.00 | 3.20 | | 128.00 | | |
| Road 5 | | 1 | 42.00 | 3.00 | | 126.00 | | |
| cross road | | 1 | 92.00 | 4.00 | | 368.00 | | |
| | | | | | | **1393.80** | 95.40 | **132968.52** |
| **Basic rate** | **90.00** | | | | | | | |
| **Area Weightage 6%** | **5.40** | | | | | | | |
| **Final Rate** | **95.40** | | | | | | | |
| 11 KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.157, I.No.20.18 of PW,P&IWTD SR 2016-17) | | | | | | | | |
| Road Formation | Cum | | | | | | | |
| Connecting Road between Saraiplaya Main Rd al | | 1 | 112.00 | 1.20 | 0.23 | 30.91 | | |

| | Description of work | Unit | No. | Length m | Breadth m | Depth m | Quantity | Rate in Rs. | Amount in Rs. |
|---|---|---|---|---|---|---|---|---|---|
| | Balanced Sadiq Layout Main Rd | | 1 | 60.00 | 5.50 | 0.23 | 75.90 | | |
| | Bad Reaches | | | | | | | | |
| | | | 8 | 2.00 | 2.50 | 0.23 | 9.20 | | |
| | | | 10 | 1.50 | 1.50 | 0.23 | 5.18 | | |
| | | | | | | | **121.19** | 1768.08 | **214273.62** |
| | **Basic rate** | **1668.00** | | | | | | | |
| | **Area Weightage 6%** | **100.08** | | | | | | | |
| | **Final Rate** | **1768.08** | | | | | | | |
| | KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.160, I.No.21.6 of PW,P&IWTD SR 2016-17) | | | | | | | | |
| | Road Formation | Sqm | | | | | | | |
| | Connecting Road between Saraiplaya Main Rd al | | 1 | 112.00 | 1.20 | -- | 134.40 | | |
| | Balanced Sadiq Layout Main Rd | | 1 | 60.00 | 5.50 | -- | 330.00 | | |
| | Bad Reaches | | | | | | | | |
| | | | 8 | 2.00 | 2.50 | -- | 40.00 | | |
| | | | 10 | 1.50 | 1.50 | -- | 22.50 | | |
| | | | | | | | **526.90** | 27.56 | **14521.36** |
| | **Basic rate** | **26.00** | | | | | | | |
| | **Area Weightage 6%** | **1.56** | | | | | | | |
| | **Final Rate** | **27.56** | | | | | | | |
| 3 | KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.160, I.No.21.2 of PW,P&IWTD SR 2016-17) | | | | | | | | |
| | Road Formation | Sqm | | | | | | | |
| | Saraipalya | | | | | | | | |
| | Balanced Portion in Saripalya Mn | | 1 | 165.00 | 6.20 | -- | 1023.00 | | |
| | Connecting Road between Saraiplaya Main Rd al | | 1 | 112.00 | 6.00 | -- | 672.00 | | |
| | Balanced Sadiq Layout Main Rd | | 1 | 60.00 | 5.50 | -- | 330.00 | | |
| | | | | | | | **2025.00** | 3.18 | **6439.50** |
| | **Basic rate** | **3.00** | | | | | | | |
| | **Area Weightage 6%** | **0.18** | | | | | | | |
| | **Final Rate** | **3.18** | | | | | | | |
| 14 | KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.160 I.No.21.7 of PW,P&IWTD SR of 2016-17) | | | | | | | | |
| | **For Laying BC** | Sqm | | | | | | | |
| | Saraipalya | | | | | | | | |
| | Balanced Portion in Saripalya Mn | | 1.00 | 165.00 | 6.20 | -- | 1023.00 | | |
| | Connecting Road between Saraiplaya Main Rd al | | 1.00 | 112.00 | 6.00 | -- | 672.00 | | |
| | Balanced Sadiq Layout Main Rd | | 1.00 | 60.00 | 5.50 | -- | 330.00 | | |
| | | | | | | | **2025.00** | 11.66 | **23611.50** |
| | **Basic rate** | **11.00** | | | | | | | |
| | **Area Weightage 6%** | **0.66** | | | | | | | |
| | **Final Rate** | **11.66** | | | | | | | |

| Description of work | Unit | No. | Length m | Breadth m | Depth m | Quantity | Rate in Rs. | Amount in Rs. |
|---|---|---|---|---|---|---|---|---|
| SRRB M500-19. Providing and laying bituminous concrete 40 mm compacted thickness with G30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with ituminous binder at 6% of mix and filler, transporting the hot mix to work site, laying with a nechanical paver finisher to the required grade, level and alignment, rolling with smooth vheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H pecification clause No. 500.9 complete in all respects as per specifications. MORTH pecification No. 509 (P.No.164 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17) | | | | | | | | |
| Road Formation | Cum | | | | | | | |
| Saraipalya | | | | | | | | |
| Balanced Portion in Saripalya Mn | | 1 | 165.00 | 6.20 | 0.04 | 40.92 | | |
| Connecting Road between Saraiplaya Main Rd al | | 1 | 112.00 | 6.00 | 0.04 | 26.88 | | |
| Balanced Sadiq Layout Main Rd | | 1 | 60.00 | 5.50 | 0.04 | 13.20 | | |
| | | | | | | **81.00** | 7083.98 | **573802.38** |
| **Basic rate** | **6683.00** | | | | | | | |
| **Area Weightage 6%** | **400.98** | | | | | | | |
| **Final Rate** | **7083.98** | | | | | | | |
| KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick ncluding reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free rom streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.197, .No.24.15 of PW,P&IWTD SR 2016-17) | | | | | | | | |
| Edge line | | | | | | | | |
| | | 2 | 337.00 | 0.10 | -- | 67.40 | | |
| | | | | | | **67.40** | 542.72 | **36579.33** |
| **Basic rate** | **512.00** | | | | | | | |
| **Area Weightage 6%** | **30.72** | | | | | | | |
| **Final Rate** | **542.72** | | | | | | | |
| | | | | | | | **Total Construction Cost** | **4504347.92** |
| | | | | | | | **Tender Premium 10%** | **450434.79** |
| | | | | | | | **Cost towards Third Party Inspection @ 1%** | **45043.48** |
| | | | | | | | **Sub Total** | **4999826.19** |
| | | | | | | | **Miscellaneous and rounding off** | **173.81** |
| | | | | | | | **Total** | **5000000.00** |

**ficate.**

The workspot was inspected and work is found to be necessary.
The area comes within the Bruhat Bangalore Mahanagara Palike limits.
The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
The provisions made in the estimate are necessary and essential.

ant Engineer

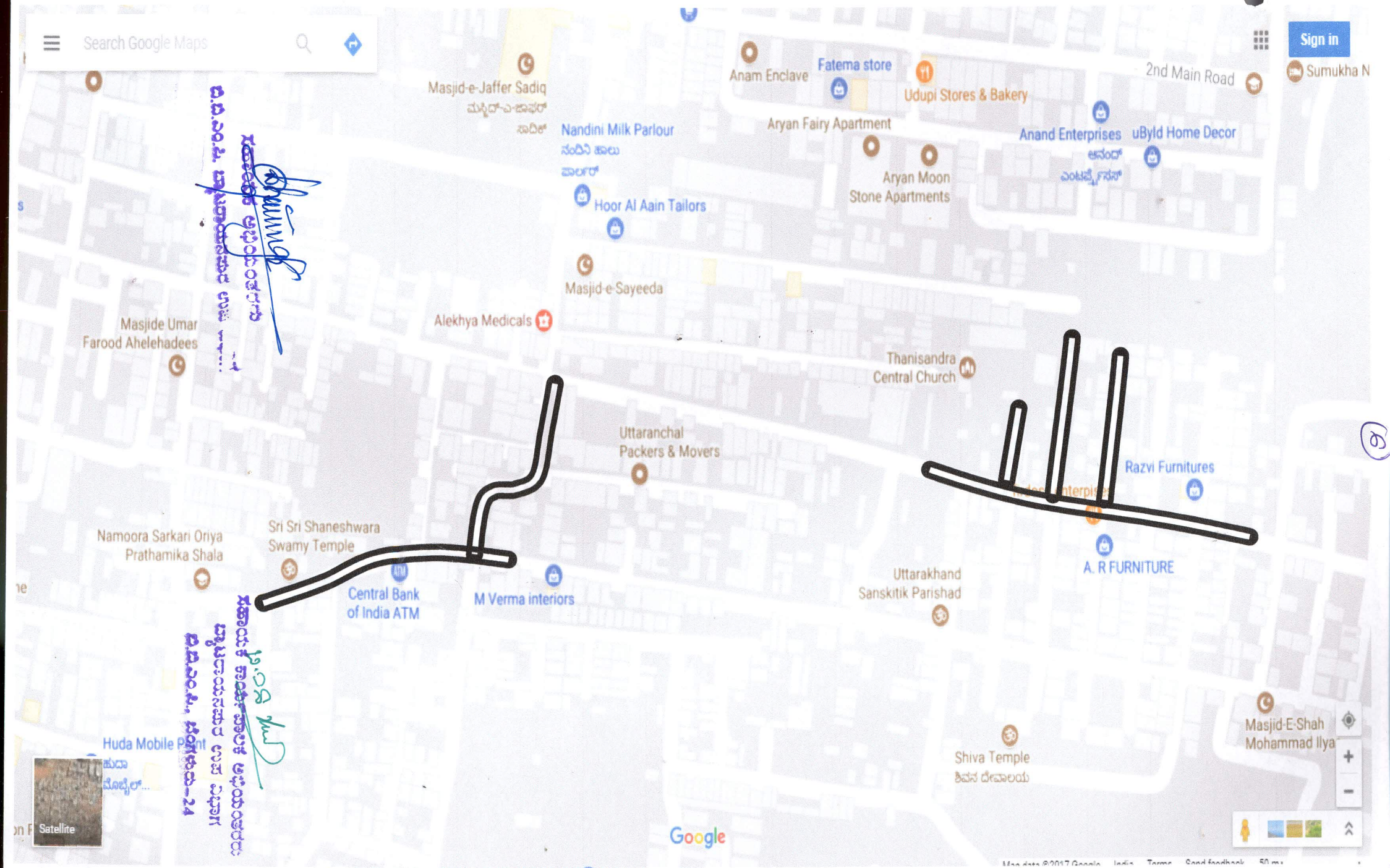
Assistant Executive Engineer

Executive Engineer

ADMINISTRATIVE APPROVAL
Accorded For Rs. Fifty lakhs only
Head of A/C P-3111
Div. Ref. No. 104/17-18 Date 19/12/17
AE 19/12
EE(BTP) 19/12

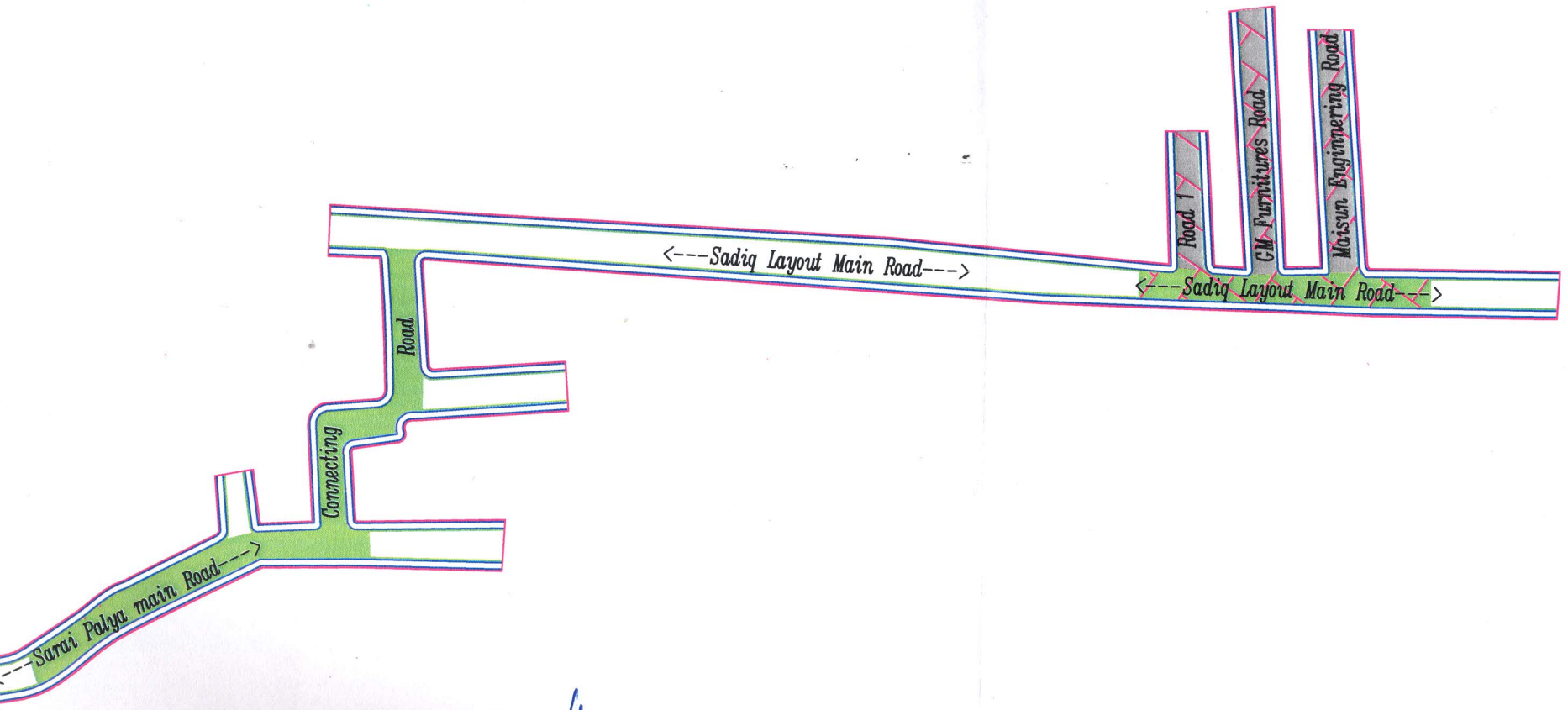
Technical Sanction
Accorded For 50.00 Lakhs
Head of A/C P3111
CER NO : 472 Dt: 27-12-2017
TA CE (YNK)

# KEY MAP – SARAIPALYA



BRUHAT BANGALORE MAHANAGARA PALIKE

# Improvements to Drains and Asphalting to Roads at Vidyasagar Layout and Surrounding Area in Ward No 06 Byatarayanapura Sub Division




| Road Nam |
| --- |
| Saraipalya |
| Saraipalya Main |
| Connecting Road |
| Sadiq Layout Ma |
| Maisun Enginnerin |
| GM Furnitures R |
| Road 1 |
| Road 2 |
| Road 3 |
| Road 4 |
| Road 5 |

ಸಹಾಯಕ ಅಭಿಯಂತರರು

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು